

Date: Thu, 9 Sep 93 01:28:42 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #1069
To: Info-Hams

Info-Hams Digest Thu, 9 Sep 93 Volume 93 : Issue 1069

Today's Topics:

 alinco dj-580 repair
 Alpha Bravo; America Brazil; America Boston
 Amiga LOGGER programs V4.00
 Daily Solar Geophysical Data Broadcast for 08 September
 Hamfest
 How to get around antenna covenants (or piss off the neighbors)
 I can't find my original license
 Is This SAFE?
 It's been almost 8 weeks - should I call?
 It came!
 Newsline on GENie? H
 QSL help needed - J28BF
 squeeze em'
 Strange HAM interference
 Yagi for Cellular Phone? (3 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 9 Sep 1993 00:19:01 GMT
From: swrinde!gatech!howland.reston.ans.net!math.ohio-state.edu!magnus.acs.ohio-
state.edu!csn!news.sinet.slb.com!news.San-Jose.ate.slb.com!jones@network.ucsd.edu
Subject: alinco dj-580 repair
To: info-hams@ucsd.edu

John L. Isenhour (isenhour@lambic.fnal.GOV) wrote:
: My alinco dj-580t has lost the speaker on one of the bands, this occurred while

: using a headset. You can see that its getting a signal, but no audio. Any
: ideas on how to fix this? Where is a good place to send it for repairs?

Before you get heroic about sending off your radio, please make sure that you
don't have the "tone squelch" set. (I've accidentally tried to listen to
a non-PLed radio's output with my tonesquelch on, and seen the "meter" move
but no noise out of the speaker and was blaming the radio for this operator
error.)

73,
Clark

--

Disclaimer: The opinions expressed above are mine and not those of Schlumberger
because they are NOT covered by the patent agreement!

Phone: (602) 345-3638 Internet: jones@sj.ate.slb.com
Packet: N7RPQ@K7BUC.AZ.USA.NA RF: N7RPQ
Snail: Clark Jones, Schlumberger Technologies, 7855 S. River Pkwy #116, Tempe,
AZ 85284-1825

Date: Wed, 8 Sep 1993 18:39:55 GMT
From: swrinde!sdd.hp.com!col.hp.com!news.dtc.hp.com!srngenprp!
alanb@network.ucsd.edu
Subject: Alpha Bravo; America Brazil; America Boston
To: info-hams@ucsd.edu

Ron Natalie (ron@topaz.bds.com) wrote:

: > Is there a preferred alphabet here or is the situation
: > completely informal?

: The PREFERRED one is

: Alpha Bravo Charlie Delta Echo Foxtrot Golf Hotel India Juliet Kilo
: Lima Mike November Oscar Papa Quebec Romeo Sierra Tango Uniform Victor
: Whiskey X-ray Yankee Zulu

: People who use things like Kilowatt and America are idiots.

I wouldn't go that far, but for sure, the standard ICAO alphabet is
easier to copy through noise and interference. If you use the standard
alphabet, there are only 26 possibilities for each character received.
If you copy something like "---ember" you know it must be "November"
and not "September" "October" "December" "Remember" or whatever.

"ICAO" by the way, stands for "International Civil Aviation Organization."
The ICAO alphabet is used by airlines, the military, amateurs, and most

other organizations that require accurate voice communications.

AL N1AL

Date: 9 Sep 1993 02:44:24 GMT
From: tribune.usask.ca!herald.usask.ca!hardie@decwrl.dec.com
Subject: Amiga LOGGER programs V4.00
To: info-hams@ucsd.edu

I have put V4.00 of my contest logging programs on ftp.usask.ca in the
directory pub/amiga/hamradio. Use at your own risk.
73 de Pete hardie@herald.usask.ca VE5VA

Date: 9 Sep 93 03:43:19 GMT
From: news-mail-gateway@ucsd.edu
Subject: Daily Solar Geophysical Data Broadcast for 08 September
To: info-hams@ucsd.edu

!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 251, 09/08/93
10.7 FLUX=079.1 90-AVG=096 SSN=027 BKI=2331 1101 BAI=006
BGND-XRAY=A1.7 FLU1=6.2E+05 FLU10=1.3E+04 PKI=3332 0112 PAI=007
BOU-DEV=018,024,022,009,006,008,004,006 DEV-AVG=012 NT SWF=00:000
XRAY-MAX= A7.9 @ 1553UT XRAY-MIN= A1.5 @ 1911UT XRAY-AVG= A2.6
NEUTN-MAX= +003% @ 1000UT NEUTN-MIN= -002% @ 2110UT NEUTN-AVG= +0.1%
PCA-MAX= +0.1DB @ 1900UT PCA-MIN= -0.9DB @ 2050UT PCA-AVG= -0.1DB
BOUTF-MAX=55369NT @ 0002UT BOUTF-MIN=55330NT @ 1809UT BOUTF-AVG=55355NT
GOES7-MAX=P:+000NT@ 0000UT GOES7-MIN=N:+000NT@ 0000UT G7-AVG=+075,+000,+000
GOES6-MAX=P:+111NT@ 1711UT GOES6-MIN=N:-066NT@ 1611UT G6-AVG=+091,-010,-045
FLUXFCST=STD:080,082,083;SESC:080,082,083 BAI/PAI-FCST=010,010,018/012,020,030
KFCST=2222 2334 2222 4445 27DAY-AP=009,006 27DAY-KP=2332 3122 1221 2221
WARNINGS=
ALERTS=
!!END-DATA!!

NOTE: The Effective Sunspot Number for 07 SEP 93 was 36.0.
The Full Kp Indices for 07 SEP 93 are: 2- 3- 3+ 2- 2o 3- 2- 3-

Date: 8 Sep 93 22:59:54 GMT
From: ogicse!uwm.edu!math.ohio-state.edu!magnus.acs.ohio-state.edu!bgsuvax!
uoft02.utoledo.edu!bjacobs@network.ucsd.edu
Subject: Hamfest
To: info-hams@ucsd.edu

Thanks to everyone who came back with responses on the Ohio hamfest but I am still looking for a good show close to me. Unfortunately I'll be gone The weekend of September 12 and 20th, so I can't make it to the Findly or Cincinatti shows. Is there any coming up in the Toledo area in the next few months? I can drive a couple of hours to get to one but not half-way across the country.

Bjacobs@uoft02.utoledo.edu

Date: 9 Sep 93 05:41:34 GMT

From: mnemosyne.cs.du.edu!nyx!mwgordon@uunet.uu.net

Subject: How to get around antenna covenants (or piss off the neighbors)

To: info-hams@ucsd.edu

Now, this might not work, but it's a good one to try:

Plant 100 bird feeders / lawn ornaments / stupid_little_wooden_sunflowers (tm) on the front lawn. When the neighbors come screaming about it, play "Let's Make a Deal". Gee, one little ham antenna isn't as ugly as 100 stupid_little_wooden_sunflowers (tm), now is it?

Usual variations apply, such as painting the house florescent orange, putting in a few 1000 watt flood lights on motion detectors (to keep the neighborhood safe :)), parking 20 cars in front of the house all the time, etc.

oh, by the way, make sure to get any resolution in writing!

Mike Gordon N9LOI mwgordon@uwwvax.uww.edu

Date: Wed, 8 Sep 1993 16:10:58 GMT

From: olivea!pagesat!spssig.spss.com!news.oc.com!NewsWatcher!user@uunet.uu.net

Subject: I can't find my original license

To: info-hams@ucsd.edu

With all this talk about license replacements, I started looking for mine (last renewed 7 years ago). Couldn't find it so I called the Dallas FCC to get a form 610. Turns out the field offices don't send out the forms anymore. But you can call 202 632 3676 for form requests (so they said). I'm going to try that one tomorrow...

73s de WB5KXH

===== insert usual disclaimers here =====

Bob Wier, East Texas State U., Commerce, Texas

wier@merlin.etsu.edu (watch for address change)

Date: Wed, 8 Sep 1993 18:33:53 GMT
From: swrinde!sdd.hp.com!col.hp.com!news.dtc.hp.com!srngenprp!
alanb@network.ucsd.edu
Subject: Is This SAFE?
To: info-hams@ucsd.edu

Rich Mulvey (rich@mulvey.com) wrote:
: Jim_Showalter@Taligent.com (Jim Showalter) writes:

: > We are very interested in a parcel of real estate located on Mt. Madonna.
: > However, the parcel is no more than 200 yards from the biggest antenna
: > we've ever seen (except for the Mt. Sutro tower). ...

: > 2) Assuming you can identify the type of antenna in #1 above, is it save to
: > build a house no more than 200 yards from this antenna, or not? A recent
: > Swedish study of low frequency electromagnetic waves showed

I think you would be in much greater danger of the antenna falling on you
than getting damaged by the RF radiation. For one thing, the dish antennas
direct the microwave energy in a fairly narrow beam, so very little of the
signal will appear at ground level.

: If nothing else, I personally wouldn't buy a house in that location
: because I *know* that it would cut down on the number of interested
: people when I was ready to sell it:

That would be my major concern. Many people don't like the looks of
a big radio tower. (Although we hams can't understand such a viewpoint!)
Also, many folks have been convinced that radio waves cause cancer,
despite the lack of evidence.

Alan Bloom N1AL

Date: Wed, 8 Sep 1993 15:13:52 GMT
From: netcomsv!netcom.com!pineapp@decwrl.dec.com
Subject: It's been almost 8 weeks - should I call?
To: info-hams@ucsd.edu

In article <1993Sep8.002842.28024@news.unomaha.edu> ncc2001@cwis.unomaha.edu
(Michael Fortner) writes:
>Don't waste your \$\$\$ calling. After 12 weeks I called on a Thursday and asked
>and the person on the other end said that it was not on record yet (in the

++++++
+ Tom Bodoh - Sr. systems software engineer, Hughes STX, N0YGT +
+ USGS/EROS Data Center, Sioux Falls, SD, USA 57198 (605) 594-6830 +
+ Internet; bodoh@dgg.cr.usgs.gov (152.61.192.66)
+
+ "Welcome back my friends to the show that never ends!" EL&P
+
++++++

Date: 9 Sep 1993 00:30:44 GMT
From: swrinde!gatech!howland.reston.ans.net!usenet.ins.cwru.edu!magnus.acs.ohio-
state.edu!csn!news.sinet.slb.com!news.San-Jose.ate.slb.com!jones@network.ucsd.edu
Subject: Newsline on GENie? H
To: info-hams@ucsd.edu

Steve Coletti (bigsteve@dorsai.dorsai.org) wrote:

: ==> In a message to All on 09-08-93 02:27, Clark Jones said: <=-

: Jo> I didn't catch much of this week's Newsline, but they did mention that
: Jo> they were going to make the entire script available on GENie. Since I
: Jo> (and probably a lot of other Usenet readers) don't have access to
: Jo> GENie, I would hope that someone would be kind enough to transfer it
: Jo> over on a regular basis!

: Newsline is a copywrited feature, permission would have to be granted.
: I'll ask Bill if he will allow me to forward it to r.r.info on a regular
: basis.

The Newsline I heard said something remarkably similar to the GNU Copyright
notice, i.e., if you copy the complete thing, including the copyright notice,
it's OK. They were specifically advocating making it available via Packet,
by the way. (I suspect that they just hadn't thought of Usenet.) Anyway,
if you're worried and can access the Sept. 3, 1993 edition, please review
the last few paragraphs.

73,
Clark

--

Disclaimer: The opinions expressed above are mine and not those of Schlumberger
because they are NOT covered by the patent agreement!

Phone: (602) 345-3638 Internet: jones@sj.ate.slb.com
Packet: N7RPQ@K7BUC.AZ.USA.NA RF: N7RPQ
Snail: Clark Jones, Schlumberger Technologies, 7855 S. River Pkwy #116, Tempe,
AZ 85284-1825

Date: 8 Sep 1993 14:44:08 GMT
From: pipex!sunic!news.funet.fi!funic!nokia.fi!dshp01!mlaiho@uunet.uu.net
Subject: QSL help needed - J28BF
To: info-hams@ucsd.edu

Some days ago I contacted J28BF in Djibouti, but missed the QSL info.

Can someone help with the QSL address of J28BF?

Thanks in advance!

Mikko
OH2BCH

Date: Thu, 9 Sep 1993 03:08:38 GMT
From: pa.dec.com!nntpd2.cxo.dec.com!goedux.enet.dec.com!jepsen_st@decwrl.dec.com
Subject: squeeze em'
To: info-hams@ucsd.edu

> i am a straight key user, and upgrading to a kent iambic paddle.
> since i have never used paddles seriously (atleast for cw ;-)),
> i would like to get the net wisdom on proper usage, and learning
> techniques for iambic keys.
>
> any help appreciated.
>
> 73 es cul
> krishna, kb8fav/aa

I'm no expert, but I do use an iabmic key (Brown Bros. and Heath uMatic). The technique that I use is to squeeze the key to produce some characters or parts of characters. If you hold both paddles down simultaneously, the keyer will alternate between dots and dashes. Whichever key is pressed first will determine the order.

To send a 'c' for instance, press the dash key first as you squeeze the paddles together, then release as the character completes. To send a 'q', hold the dash paddle down, after the second dash is nearly done, touch the dot paddle and release it while continuing to hold the dash paddle, when the character completes, release the dash paddle.

I hope this helps.....Steve..AI7W

Date: Wed, 8 Sep 1993 18:46:06 GMT
From: swrinde!sdd.hp.com!col.hp.com!news.dtc.hp.com!srngenprp!
alanb@network.ucsd.edu
Subject: Strange HAM interference
To: info-hams@ucsd.edu

SKLOSS, TIMOTHY WILLIAM (tskloss@zeus.tamu.edu) wrote:
: Here's the situation. A friend of mine was telling me the problem his mother
: was having with a HAM who was living a few doors down ...

: The cord acts like an antenna, and the AM signal comes out of the telephone
: handset speaker. ... sometimes it is completely legible!

It is probably a CB'er and not a ham. Few hams use AM any more.

: He [the HAM] is well aware of his interferences since all his neighbors have
: complained, but still he persists that he is doing nothing wrong. His antenna
: is a single vertical pole since antenna structures are prohibited in the
: neighborhood. I assume that he is just below the maximum allowed output, so
: the FCC can't touch him.

Sounds like a CB antenna. CB'ers are limited to 5 watts of AM. Sounds like
he is running illegal power. If so, perhaps the FCC can help.

AL N1AL

Date: Wed, 8 Sep 1993 14:38:54 GMT
From: swrinde!cs.utexas.edu!sdd.hp.com!col.hp.com!news.dtc.hp.com!srngenprp!
glenne@network.ucsd.edu
Subject: Yagi for Cellular Phone?
To: info-hams@ucsd.edu

In case anyone is interested, I have a design for a 4.2 lambda (about
5' boom) yagi adapted from the NBS work which I originally built for my
904 digital radios. The first version, which followed the NBS
literature exactly, was centered considerably below 904. This
confirms what W1JR discovered about the NBS data. I built an identical
pair of the things and measured their combined performance using a two
port network analyzer. The result was that although they had a
relatively narrowband match, below 2:1 only over 20 MHz or so, the gain
of the system, including mismatch loss, was almost flat over about 100
MHz. This arrangement looked rather like a bandpass filter from 800 to
900 MHz. Individual antenna gain is in the area of 14 dBd.

I subsequently redesigned the antenna to shift the gain center up

about 5 percent however, I still have the original dimensions around in case someone wants to build one. Construction is from standard Cu water pipe and 1/8" brazing rod. It should be under \$5 in parts.

I don't know what the rules are about directional antennas with cell-tel but I should think they would be fine since they tend to minimize qrm to adjacent cells at the same time they maximize performance into the desired one. As I demonstrated in an ARRL CNC paper, if the entire cellular system were able to utilize directional arrays potential information capacity could be greatly increased.

Glenn Elmore n6gn

N6GN @ K3MC

amateur IP: glenn@SantaRosa.ampr.org

Internet: glenne@sr.hp.com

Date: Wed, 8 Sep 1993 16:00:40 GMT
From: olivea!pagesat!spssig.spss.com!news.oc.com!NewsWatcher!user@uunet.uu.net
Subject: Yagi for Cellular Phone?
To: info-hams@ucsd.edu

In article <747504441snx@skyld.tele.com>, jangus@skyld.tele.com (Jeffrey D. Angus) wrote:

>
> In article <CCzo76.IFp@fc.hp.com> goris@fc.hp.com writes:
>
>
> Eh? Cellular? Emergency? What happened to Amateur radio? I thought that's
> what our entire purpose and being was for? It's not the channel cops will
> arrest you now for calling a tow truck (or Pizza Delivery).
>

Yeah, I've thought about trying to order a pizza - but they'd have to have a snowmobile to get to the place in the winter :-)

Seriously, once my partner and I got our cabin finished we started to get a

LOT of request from friends to use it for vacations (unforseen effect!). It's pretty remote and takes about 30 minutes in a four wheel drive vehicle to get to it. We've been pretty nervous about that since if someone had a serious accident and couldn't drive they might well die there. Thus someone has to go up and check on people every few days to make sure they

are all right. Of if they end up shooting themselves or getting attacked by a bear (or buried by an avalanche - which happens there - we "lost" a snowplow driver a year and a half ago in one) and need a life flight helicopter then they are out of luck. So even though *I'm* set with 2 meters,
there would definitely be a use for a cellular phone there.

Incidentally, looks like you are as much as an O.M. (O.F.? :-) as I am...

73's de WB5KXH

===== insert usual disclaimers here =====

Bob Wier, East Texas State U., Commerce, Texas
wier@merlin.etsu.edu (watch for address change)

Date: Wed, 8 Sep 1993 15:40:54 GMT
From: swrinde!elroy.jpl.nasa.gov!usc!sol.ctr.columbia.edu!news.kei.com!
news.oc.com!NewsWatcher!user@network.ucsd.edu
Subject: Yagi for Cellular Phone?
To: info-hams@ucsd.edu

In article <26i5dv\$7l6@sbctri.sbc.com>, rvt@calvin.sbc.com (Roger V. Thompson) wrote:

>
> I suspect the system is operating in complete agreement with FCC
> requirements for population or geographic coverage in the CGSA or
> RSA they are licensed for. The FCC recognizes cellular systems
> are a business and not a philanthropic venture. Here are a few
> things you might think about in evaluating your situation. In the
> United States, total capital investment allocated to a cell site
> is in the range of \$1,000,000. Each cell serves, on average, about
> 1000 customers. Will the costs of putting a cell site
> in your area justify the investment? Are there 1000 potential
> subscribers in your area? If it were your money, would you build
> one?
>

{ followed by technical information }

=====

Hmmmmmm. From my talk with the company, it would appear to me that they *could* put in a cell, but just are not going to for the reason you describe - they don't perceive there to be a large enough market. At this point I don't know whether the alternate carrier is allocated, so the situation might not be as bleak as I'm making out.

One thing to consider is that "over the hill" in Telluride, there IS

a cell by that company and in fact they are expanding coverage by putting in another cell site (unfortunately, that hill is 13,000' high so I don't think we can get into the cell over there, even though it's only 18 miles as opposed to the one 80 miles away in Grand Junction which seems to occasionally trigger my partner's phone). Now, Telluride doesn't have any more population than "my" town (Ouray), but has a LOT more money (incidentally, the other "Western Slope" towns in Colorado which have service is Durango (fairly large) and Aspen (very rich)). I'm not sure why GJ at 80 miles can trigger a signal, but it would appear to be a combination of it being about 4,000' and our town at 8,000' plus perhaps some reflection(s) off surrounding mountains. Plus maybe ducting effects (don't know how strong that would be at 800 Mhz).

I'm not saying they should be required to build a cell, but I'd like to see some kind of time limit as to how long they can hold the license without doing so. Allow the possibility of someone else coming in and doing it. I've also heard that it's possible to put in a cell for \$200K, but I'm certainly no expert. I'm sure there are lots of variable factors. But I also feel that cells to some extent *are* philanthropic ventures just as tv stations are - they have exclusive use of a scarce resource (spectrum space) and thus should serve the public interest to some extent. As to whether I would put in a cell, if I had the know how and the resources to do so, yes I would. I believe in the town and having a cell would be a valuable community asset. There would of course be some minimum level of revenue coming in required to at least cover the amortization of the equipment and pay myself a reasonable wage as owner. And I'd think it would be right that if I couldn't swing it I should give up the license to someone who might be able to do so.

Incidentally, thanks for the technical information. Very interesting!

===== insert usual disclaimers here =====

Bob Wier, East Texas State U., Commerce, Texas
wier@merlin.etsu.edu (watch for address change)

Date: 8 Sep 93 22:04:48 GMT
From: swrinde!elroy.jpl.nasa.gov!usc!howland.reston.ans.net!noc.near.net!
transfer.stratus.com!jjmhome!pig!die@network.ucsd.edu
To: info-hams@ucsd.edu

References <N4HY.93Sep7093718@wahoo.ccr-p.ida.org>, <26jnim\$43k@news.delphi.com> ,

<1993Sep8.094751.29146@ke4zv.atl.ga.us>ho
Reply-To : jjmhome!pig!die@transfer.stratus.com
Subject : Is 8 DSP enough for HF CW ?

In article <1993Sep8.094751.29146@ke4zv.atl.ga.us> gary@ke4zv.UUCP (Gary Coffman) writes:

>
>Ahem, are you seriously saying that there are commercial receivers
>on the market that exhibit more than 50 db of dynamic range on their
>audio outputs? If we assume that 1 mw is the minimum signal needed
>to drive the speaker to audibility, then to get 50 db of dynamic
>range, the radio would need to output 100 watts. I've never seen
>a ham receiver that did more than about 3 watts, and at 10% THD
>at that. That's about 34 db, and well within the capabilities of
>an 8 bit system.
>

Ah, but the rub is noise to signal in *what* bandwidth. One usually measures the SNR of a SSB/CW receiver by measuring the audio power output (usually flat weighted) with a strong CW carrier with AGC off (MGC mode with fixed gain) and then measuring the noise power with the CW tone turned off. Sometimes (most often in measuring telephone line characteristics) this is done instead by notching out the tone (usually 1004 hz) with a very sharp and deep notch filter and measuring the resultant left over energy.

Both of these measurements are of energy over the whole 200-3000 communications audio bandwidth. And indeed few SSB receivers will do much better than 45-50 db or so measured this way. *But* and this is an important but, this is total energy over 200-3000 hz or so. But actual CW (A1) (Morris, which I hate) signals occupy something around 50 to 100 hz useful bandwidth for the carrier and sidebands at something around 400-800 hz depending on operator preference.

What this all means is what is relevant is the energy in the 100 hz (roughly the bandwidth of the ear when listening to CW) at around say 600 hz coming out of the receiver. If we assume flat white noise (equal amplitude per hertz) and a 2700 hz IF filter noise bandwidth, this is 100/2700 of the noise power measured in the full bandwidth. or 14.3 db less noise than the measured -50 db. But 60 and 120/180 hz hum and various other non white or non broadband noise components may make up a significant part of the noise energy in that -50 db, so the the actual white true noise energy SNR in a 100 hz CW bandwidth at the CW note frequency may be more like -60 or 65 or more db in some good receivers.

This implies that a DSP based CW audio filter looking at a weak barely detectable CW signal in the presence of strong interfering signals in the IF passband that are controlling the gain of the receiver

could quite easily be looking for a signal at -60 or -65 db or so down from the audio output, since many people claim to be able to copy CW with nearly 0 db SNR. Add to this some headroom to take the crest factor of speech into consideration (8-10 db) so that digital representation of the audio going into the DSP is not being clipped on voice peaks, and this implies that 70 or 75 db of dynamic range is needed to fish that weak CW signal at the noise floor of the receiver (that measures 50 db broadband SNR) out from a strong nearby voice signal which is controlling the receiver AGC.

In terms of bits of resolution this implies that 13 bit or 14 bit A/Ds and numeric precision in the DSP is required so that quantization and truncation noise does not exceed the narrow band (100 hz) noise floor of a good SSB receiver that measures less than 50 db of SNR on a AC RMS voltmeter attached to its output.

Granted that this is based on the limit case of digging a very weak CW signal out from SSB voice as received in a 2.7 khz bandwidth IF, but the resolution using flat 8 bit A/Ds is worse than this level by a considerable amount, further the level of the audio going into the 8 bit A/Ds may not be exactly optimized (thus losing another bit or two).

Thus the experience of those who have tried to use 8 bit A/Ds in DSP based filters for ham hf cw is quite consistent with theory.

End of Info-Hams Digest V93 #1069
